

Notice of Allowability

Application No.

10/721,796

Examiner

Chukwuma O. Nwaonicha

Applicant(s)

CHOUDHARY ET AL.

Art Unit

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/6/05.
2. ☒ The allowed claim(s) is/are 1-15.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


JOHANN RICHTER
SUPERVISORY PATENT EXAMINER
GROUP 1802

DETAILED ACTION

Current Status

1. This action is responsive to Applicants' Remarks of 6 December 2005.
2. Receipt and entry of Applicants' amendment is acknowledged.
3. Claims 1-15 are under active consideration in the instant application.

Allowed Claims

Claims 1-15 are allowable over the prior art of record.

Reason For Allowance

The following is an examiner's statement of reasons for allowance: Applicants claim a biphasic process for the liquid phase epoxidation of an olefinic compound comprising at least one olefinic group to an epoxide by an organic hydroperoxide, using a catalyst comprising chromate or dichromate anions; wherein all the other variables are as defined in the claim. The process was neither found to be obvious nor anticipated by the prior art of record.

The closest prior art are Rothenberg et al., {Pyridines as Bifunctional Co-Catalyst in the CrO₃-Catalyzed Oxygenation of Olefins t-Butyl Hydroperoxide, Journal of Molecular Catalysis A: Chemical 136 (1998) 253-262} and Kaplan, {US 3,523,956}. However, applicants argue that Rothenberg et al. teach a process in which the catalyst (chromic acid) is extracted into the organic phase by the organic hydroperoxide TBHP and various pyridines while applicants claim a biphasic process in which the catalyst is present in dissolved form in the aqueous phase. Applicants contend that invention

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employs chromate or dichromate anions instead of chromic acid as taught by Rothenberg et al.

On the other hand, applicants argue that Kaplan does not disclose chromate or dichromate anions instead Kaplan teaches a process that involves naphthenates and carbonyls of chromium and the chromium is not a preferred metal in catalyst disclosed in Kaplan.

Applicants' argument is found persuasive because these differences are not readily apparent and would not have been suggested to one of ordinary skill.

A search of the prior art failed to uncover any reference that teaches or motivates one of ordinary skill to disclose a biphasic process for the liquid phase epoxidation of an olefinic compound with catalyst comprising chromate or dichromate anions as claim by applicants.

All claims (1-15) are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chukwuma O. Nwaonicha whose telephone number is 571-272-2908. The examiner can normally be reached on Monday thru Friday, 8:30am to 5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chukwuma O. Nwaonicha, Ph.D.
Patent Examiner
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Johann R. Richter, Ph.D., Esq.
Supervisory Patent Examiner,
Technology Center 1600